AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for ~~the separation of~~separating particles ~~(20, 21, 22)~~ in a compartment ~~(30)~~ of a fluidic microsystem ~~(100)~~, ~~with~~ comprising the steps:

[[-]] ~~movement of~~moving through the compartment a liquid ~~(10)~~ in which particles ~~(20, 21, 22)~~ are suspended with a predetermined direction of flow, ~~through the compartment (30), and~~

[[-]] ~~generation of~~generating a deflecting potential ~~in which~~wherein at least a part of the particles ~~(20, 21, 22)~~ is moved relative to the liquid in a direction of deflection, ~~characterized by the further steps:~~

[[-]] ~~generation of~~generating at least one focusing potential, so that at least a part of the particles is moved opposite to the direction of deflection relative to the liquid by dielectrophoresis under ~~the~~an effect of high-frequency electrical fields, and

[[-]] guiding ~~of~~ particles with different electrical, magnetic or geometric properties into different flow areas ~~(11, 12)~~ in the liquid, to thereby separate the particles.

2. (Currently Amended) The method according to claim 1, ~~in which~~wherein the direction of deflection deviates from the direction of flow and comprises a component transverse~~ly~~ to the direction of flow.

3. (Currently Amended) The method according to claim 2, ~~in which~~wherein the direction of deflection runs perpendicularly to the direction of flow toward at least one of a plurality of lateral walls of the compartment, the deflecting potential is generated by electrical, magnetic, optical, thermal and/or mechanical forces, and the flow areas comprise flow paths ~~(11, 12)~~ corresponding to different potential minima ~~that are~~ formed for the particular particles by ~~the~~ superposing of the deflecting and focusing potentials during ~~the~~ passage through the compartment in ~~the~~ a temporal average.

4. (Currently Amended) The method according to claim 3, ~~in which~~wherein the deflecting potential is formed by a direct voltage field under whose action the particles are drawn by electrophoresis to at least one of the lateral walls of the compartment ~~(30)~~.

5. (Currently Amended) The method according to claim 4, ~~in which~~wherein the particles comprise biological cells of which at least a part is lysed under ~~the~~ action of the direct voltage field.

6. (Currently Amended) The method according to claim 3, ~~in which~~wherein the liquid ~~(10)~~ comprises a suspension of biological material containing biological cells and cell components and whereby a separation of the biological cells from the cell components takes place under ~~the~~ action of ~~the~~ a direct voltage field.

7. (Currently Amended) The method according to claim 4, wherein electrodes ~~(40)~~ are arranged on walls ~~(31-34)~~ of the compartment ~~(30)~~, ~~which~~ said electrodes ~~are~~ being loaded with electrical fields for generating the dielectrophoresis and the electrophoresis.

8. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein the deflecting and focusing potentials are generated alternating in time in at least one section of the compartment ~~(30)~~ or geometrically alternating in different successive sections of the compartment ~~(30)~~.

9. (Currently Amended) The method according to ~~preceding claims 5 and 6~~claim 6, ~~in which~~wherein the electrical fields comprise high-frequency alternating voltage components and direct voltage components generated simultaneously or alternately.

10. (Currently Amended) The method according to claim 7, ~~in which~~wherein a plurality of focusing potentials is generated with an electrode array ~~(43.1 to 43.11)~~ between ~~the~~ two electrodes ~~(41, 42)~~ and ~~in which~~wherein the particles are guided onto ~~the~~ different flow paths ~~(11, 12)~~ in accordance with ~~their~~ electrical or geometric properties of the particles.

11. (Currently Amended) The method according to ~~at least one of the preceding claims 2 to 9~~claim 2, ~~in which~~wherein the particles ~~(20, 21, 22)~~ are guided onto at least two separate flow paths ~~(11, 12)~~.

12. (Currently Amended) The method according to claim 11, ~~in which~~wherein the at least two flow paths ~~(11, 12)~~ empty into other, separate compartments ~~(35, 36)~~ of the microsystem ~~(100)~~.

13. (Currently Amended) The method according to claim 12, ~~in which~~wherein the at least two flow paths ~~(11, 12)~~ empty into separate compartments ~~(35, 36)~~ of the microsystem ~~(100)~~ separated by compartment walls or electric barriers ~~(60)~~.

14. (Currently Amended) The method according to claim 1, ~~in which~~wherein the direction of deflection runs parallel to the direction of flow and several focusing potentials are generated that are asymmetrically modulated in parallel with the direction of deflection and ~~in which~~wherein the particles run through the deflecting potential at different speeds.

15. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein the particles ~~(20, 21, 22)~~ flow in front of the electrodes on a dielectrophoretic or hydrodynamic sequencing element ~~(50)~~.

16. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein a pH gradient is generated in the channel ~~(30)~~.

17. (Currently Amended) The method according to claim 16, ~~in which~~wherein the pH gradient is generated by electrical direct voltage fields provided for ~~the~~ electrophoretic separation of the particles.

18. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein a detection of the particles takes place after the guiding of the particles onto the different flow paths ~~(11, 12)~~.

19. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein the deflecting and the focusing potentials are formed by several superposed alternating voltages with different frequencies.

20. (Currently Amended) The method according to ~~at least one of the preceding claims~~claim 1, ~~in which~~wherein at least two deflecting potentials with different directions of deflection are generated.

21. (Currently Amended) A fluidic microsystem ~~with~~comprising:

[[-]] at least one compartment ~~(30)~~, through which a liquid with particles ~~(20, 21, 22)~~ is adapted to flows through in a predetermined direction of flow, ~~and~~

[[-]] a first separating device for generating a deflecting potential ~~in which~~and for moving the particles ~~(20, 21, 22) are moved~~ in a direction of deflection, and

~~characterized by~~

[[-]] a second separating device with electrodes ~~(40)~~ for generating at least one focusing potential so that the particles are moved by dielectrophoresis opposite to the direction of deflection.

22. (Currently Amended) The microsystem according to claim 21, ~~in which~~wherein the direction of deflection deviates from the direction of flow.

23. (Currently Amended) The microsystem according to claim 21 ~~or 22~~, ~~in which~~wherein the first separating device is arranged for generating electrical, magnetic, optical and/or mechanical forces.

24. (Currently Amended) The microsystem according to claim 23, ~~in which~~wherein the first separating device comprises electrophoresis electrodes, a magnetic field device, a laser or an ultrasound source.

25. (Currently Amended) The microsystem according to ~~at least one of the preceding claims 21 to 24~~claim 21, ~~in which~~wherein the first and the second separating devices are arranged separately in different, successive sections of the at least one compartment ~~(30)~~.

26. (Currently Amended) The microsystem according to claim 21, ~~23 or 25, in which~~wherein the first and the second separating devices form a common deflection unit comprising the electrodes ~~(40)~~.

27. (Currently Amended) The microsystem according to claim 26, ~~in which~~wherein the common deflection unit can be alternately controlled in time with alternating and direct voltages.

28. (Currently Amended) The microsystem according to claim 24, ~~in which~~wherein an electrode array ~~(43.1 to 43.11) consisting of~~ comprising electrode strips is arranged between the ~~electrophoretic~~electrophoresis electrodes ~~(41, 42)~~, ~~which~~ said strips ~~can be controlled~~being individually controllable with high-frequency alternating voltages.

29. (Currently Amended) The microsystem according to claim 21, ~~in which~~wherein the direction of deflection runs parallel to the direction of flow.

30. (Currently Amended) The microsystem according to ~~at least one of the preceding claims 21 to 29~~claim 21, ~~in which~~wherein the electrodes ~~(40)~~ are arranged on inner sides of ~~the~~ walls of the compartment ~~(30)~~.

31. (Currently Amended) The microsystem according to ~~at least one of the preceding claims 21 to 30~~claim 21, ~~in which~~wherein the compartment ~~(30)~~ empties into separate compartments ~~(36, 36)~~ of the microsystem ~~(100)~~.

32. (Currently Amended) The microsystem according to claim 31, ~~in which~~wherein the compartments ~~(35, 36)~~ of the microsystem ~~(100)~~ are separated by compartment walls or electrical barriers ~~(60)~~.

33. (Currently Amended) The microsystem according to ~~at least one of the preceding claims 21 to 32~~claim 21, ~~in which~~wherein a dielectrophoretic or hydrodynamic aligning element ~~(50)~~ is arranged in front of the separating devices.